Waferless recipe generation

Accent Optical Technologies now offers its SynRG (Synthetic Recipe Generator), a new "waferless" recipe creation application for its Caliper élan and Q240AT overlay metrology instruments.

SynRG takes known design details about device layout and processes them to create a metrology recipe automatically optimised for the product and process. By using advanced image simulation methods, SynRG is able to model real-world behaviour, and produces recipes which are robust even when affected by the variations that commonly occur in semiconductor fabrication processes.

Waferless recipe creation has many advantages. Process flow becomes much more efficient and easier to manage: instead of waiting for the arrival of a wafer and an engineer to write a recipe, the parameters required to create the recipe can be input to SynRG in advance so that the recipe is available as soon as the wafers arrive at the metrology tool for measurement. Reduced recipe creation time represents major cost savings in equipment and manpower. Further, automating recipe creation is good for data quality, removing many uncertainties and inconsistencies from the recipe creation process. Hugh Fink, Product marketing manager for Accent's Overlay Metrology products reports that customers who have implemented SynRG enjoy a more than 4x improvement in recipe creation efficiency.

SynRG works by the direct entry of alphanumeric "design data" - target layout and location information - into the metrology tool or an offline workstation. It is also straightforward to implement a system to provide this data automatically from the semiconductor fab's design database to the metrology tools. According to the company, this reduces manpower requirements further and lessens the chances of operator errors affecting measurement results. It also allows for efficient scheduling.

A further advantage emphasised by Accent is that with their Caliper and Q240AT overlay tools, recipes created with SynRG will run on any equivalent tool without time consuming porting or optimisation and still meet tool matching specifications.

Energy and feedstock costs blamed for price increases

Air Products is to apply a percentage price increase, effective November 1, 2005, for electronic specialty materials (ESM) and high-purity process chemicals (HPPC). The increase will be as much as 15%, and will vary according to product.

According to the company, the price increase is required to offset extraordinary pre-Katrina increases in energy and feedstock costs associated with the production and distribution of ESM and HPPC products. While energy and feedstock costs have further increased post-Katrina, Air Products is working to manage these costs at this time.

Orders for Riber

Riber has received orders for Compact21T-GaN and Compact 21T-HM research machines and an MBE 7000 production machine.

The Compact21T-GaN, which will be delivered to an undisclosed client in Europe in fiscal 2005, is one version of the Compact21T range. It enables advanced research for nitride semiconductors for the following applications: microwave devices for future generations of mobile telephony base stations; high current, high intensity, transistor type devices for high power supply electronics; and optoelectronic devices, such as blue LEDs for display or lighting, as well as blue lasers for HD-DVD applications. Riber's Compact 21T-HM research machine order is for delivery in fiscal year 2006.

For production manufacturing, Riber received an order for an MBE 7000 machine, which will be delivered in 2006. It will be used for the production of power amplifier (PA) radio frequency integrated circuits, for nomadic products. The machine, which can simultaneously process 7 wafers of 150 mm, is designed using the same technical plateform as the MBE 49 and MBE 6000 machines.

EpiCurve shipments begin

Early orders of LayTec's new sensor, EpiCurve, have now started shipping.

The first system was shipped to Aixtron, and will be installed at a customer site in Asia for growth of GaN devices on 4" wafers. The second system will be installed on a TSSEL CCS reactor for GaN/Si LED production. And a third system will be installed on a home built HVPE reactor at the end of 2006.